# *Global Information Grid (GIG) End-to-end (E2E) Systems Engineering (SE)*

C4I/I Board Meeting

7 July 2004

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# The Global Information Grid

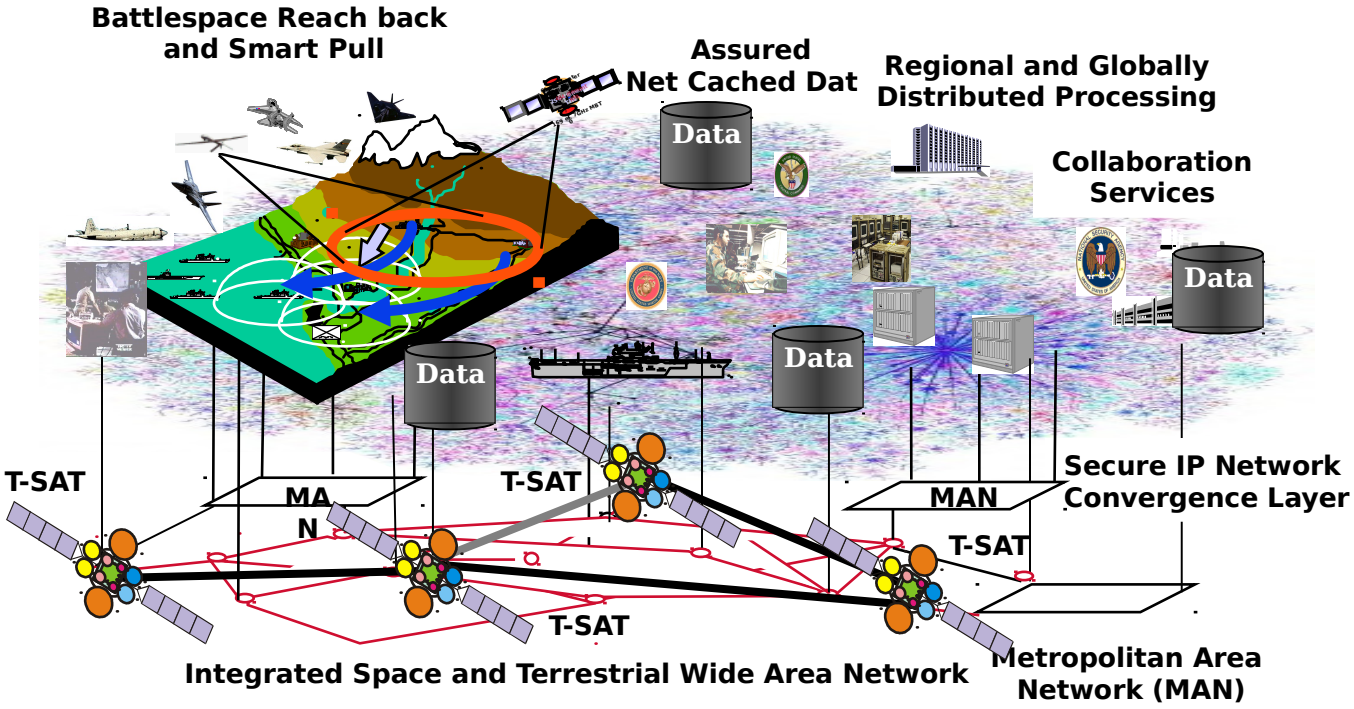
## DoD Directive 8100.1

### Technical Characteristics

Transmits information to, receives information from, routes information among or interchanges information among other equipment, software and services …

Provides retention, organization, visualization, information assurance or disposition of data, information and/or knowledge received from or transmitted to other equipment, software and services

Processes data or information for use by other equipment, software and services`




**Vision**: The GIG supports all Department of Defense, National Security and related Intelligence Community missions and functions in war and in peace. The GIG encompasses the globally interconnected, end-to-end set of information capabilities, associated processes and personnel for collecting, posting,
distributing and managing information on demand by warfighters, policy

# *The Global Information Grid*

- What is it?
  - The organizing construct for achieving net-centric operations and warfare in the DoD.
  - It is everything from the notional strategic to the operational (CJTF) level of war.
  - A vision, an entity, and an architecture.

# *The Global Information Grid*

- As a vision.
  - Establishes the conceptual framework for a “to be” information environment for the DoD.
  - The foundation for enabling the DoD to achieve net-centric operations and warfare goals.
- As an entity.
  - Comprises all data-handling systems within the DoD used by echelons down to CJTF Commanders.
  - Warfighting and Business Management.
- As an architecture.
  - The GIG is well established, documented, and integrated.
  - DoD’s enterprise architecture that defines the enterprise level information environment blueprint.

# *The Global Information Grid*

- Where are we now?
  - GIG E2E SE Working Groups (bi-weekly meetings/as required)
    - Transport
    - Enterprise Services
    - Applications and Data
    - Quality of Service
    - Network Management
    - Network Operations
    - Information Assurance
    - Spectrum
    - Mission Threads
  - Sub-Working Groups exist within many of the Working Groups

# *The Global Information Grid*

- Where are we now?
  - GIG E2E Senior Systems Engineer Board (bi-weekly meetings/as required)
    - Representatives included from all Services and several Agencies
    - Charter currently being staffed
    - Current Marine Corps involvement

# GIG E2E Systems Engineering Oversight

This is a matrix organization – people functionally support the E2E Systems Engineering Oversight process

**ASD(NII) / DoD CIO**

**Senior GIG Systems Engineer (NII)**

**GIG E2E Evaluation Facilities (NRL)**

**Chair:** Senior GIG Systems Engineer (NII)

**GIG Senior Systems Engineering Board**

Members: Senior Sys Engineering Rep from: Army, Navy, AF, USMC (Mr. Hobart), AT&L, USD(I), DOT&E, Joint Staff J-6, STRATCOM, JFCOM, IC-CIO, DISA, MDA, NSA GIG IA SPO, NSSO/TCO, TCM MJPO, GIG-BE SPO, JTRS JPO, NCES SPO, GIG Architect, & E2E Evaluation Facilities (NRL)

**GIG End-to-End Systems Engineering Working Group**

Focus Areas (form/disband as required)

| Chair Transport | Chair Enterprise Services | Chair Apps & Data | Chair (DISA) QoS | Chair Net Mgt | Chair NETOPS | Chair (NSA) Information Assurance |
|---|---|---|---|---|---|---|
| …for each area | | | …for each area | | …for each area | |
| "Sub-Working Groups" & Tiger Teams | Chair Spectrum | Chair Mission Threads | "Sub-Working Groups" & Tiger Teams | "Sub-Working Groups" & Tiger Teams | "Sub-Working Groups" & Tiger Teams | HAIPE "Tiger Team" |

# *Summary/Concerns*

- Summary
  - The GIG represents many things to many organizations.
  - There are many moving parts involved in this process (Working Groups, Sub-Working Groups, Tiger Teams).
  - Important research is being done to ensure that the systems that make-up the GIG are fully interoperable and integrated.
- Concerns
  - Ensuring that the Marine Corps realizes the significance of the GIG and understand the effects that this effort will have on the organization.
  - Applying the necessary resources to ensure adequate participation and active involvement in all aspects of this effort.

Backup slides

# Systems Engineering Influencing/Supporting JCIDS Process: JCIDS Analysis

**GIG Systems Engineering Oversight Roles**

- **Participate on the FCBs**
- **Influence FAA, FNA, FSA, ICDs, CDDs, CPDs**
- **Influence Integrated Architectures**
- **Support CONOPS discussions**
- **Ensure J-6, JFCOM, STRATCOM involvement in E2E WG meetings**
- **Coordinate inter-system test plans & monitor End-to-End interoperability testing/evaluation**

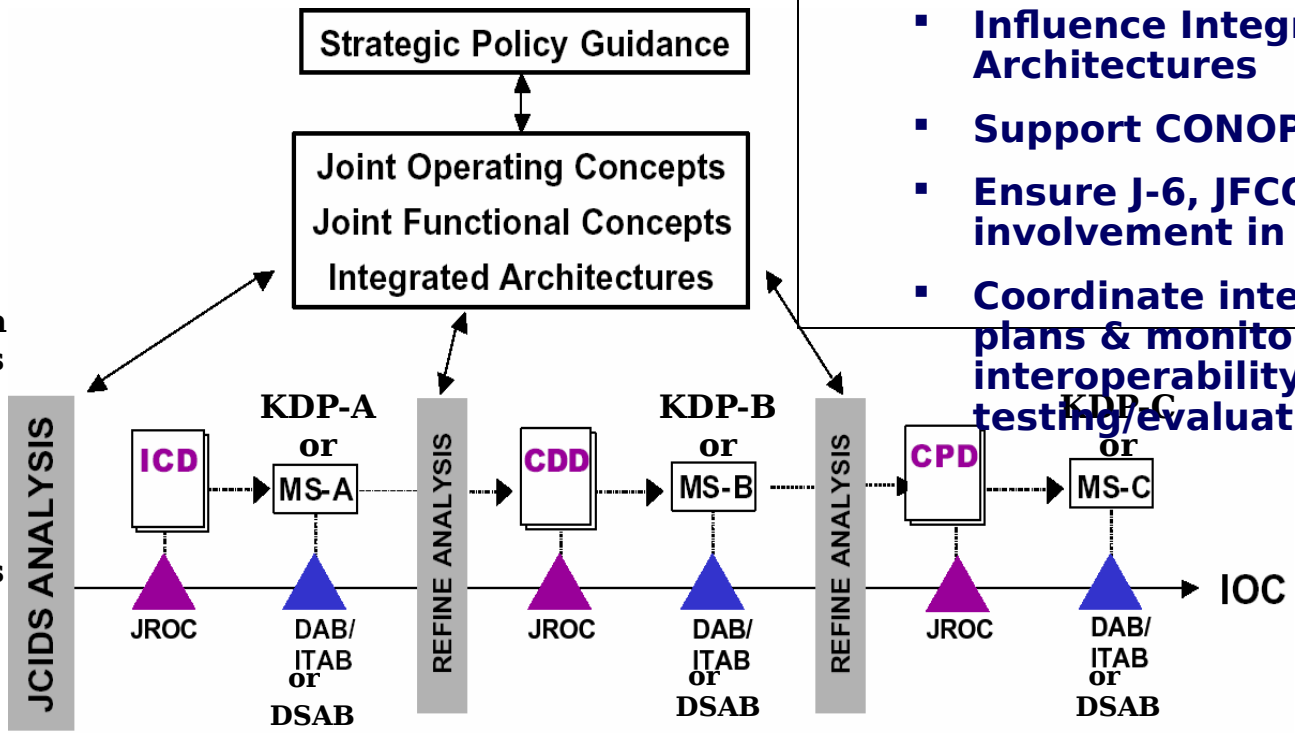
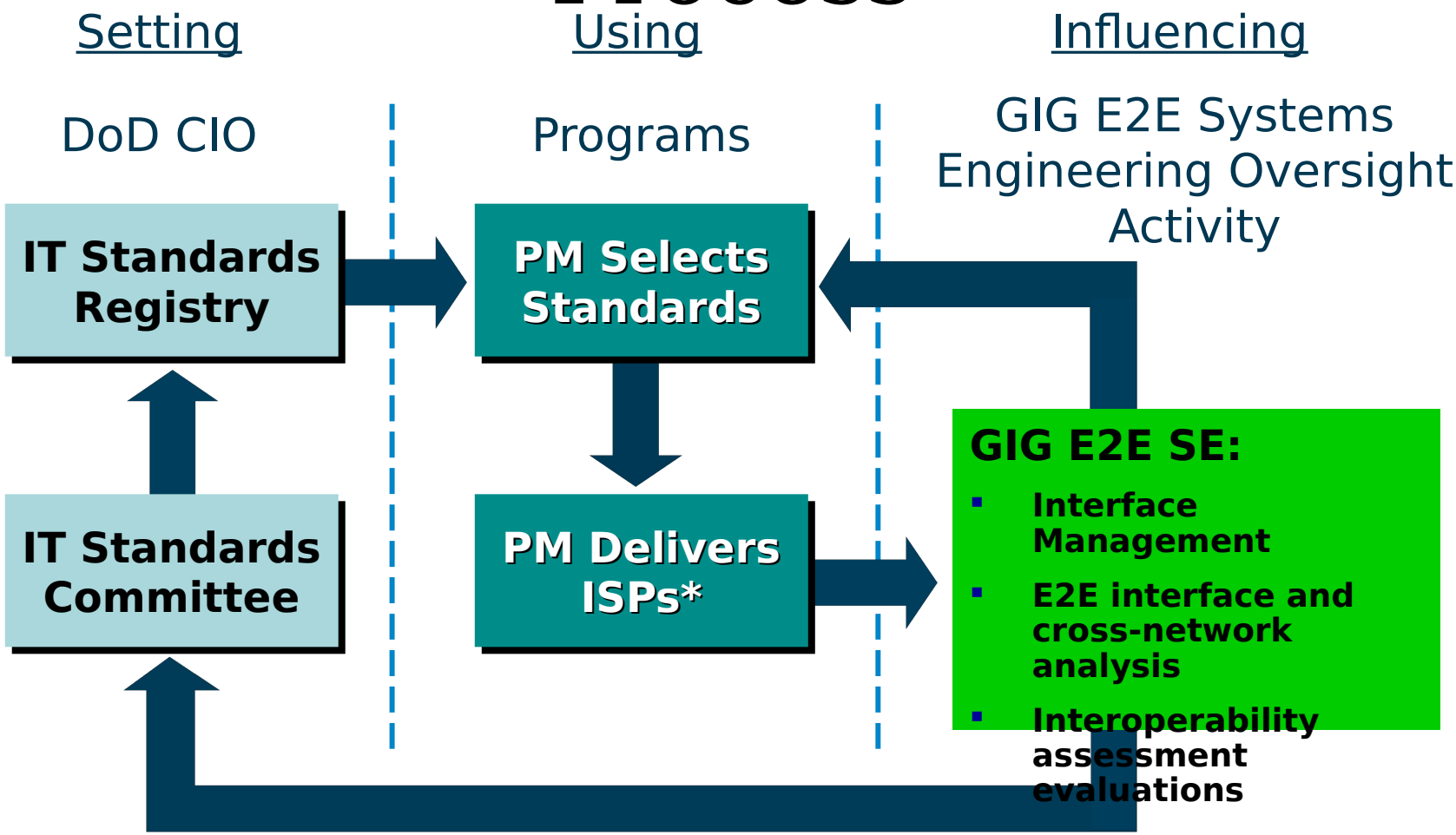


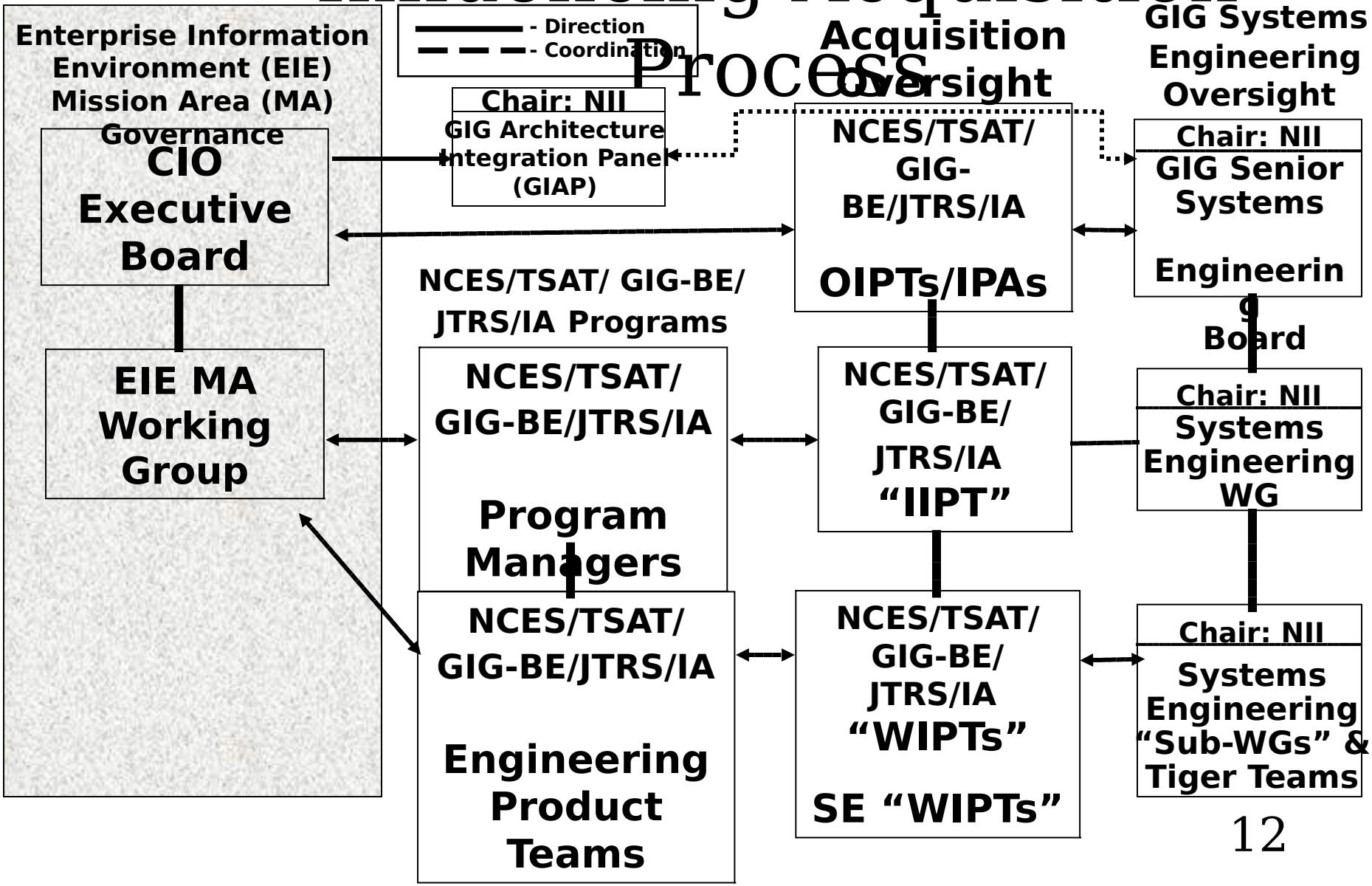

Figure A-2. JCIDS Process and Acquisition Decisions.

# Systems Engineering Influencing Standards Process




*ISP—Information Support Plan

# Oversight Influencing Acquisition Process



# The Global Information Grid

- GIG Senior Systems Engineering Board Membership
  - Dr. Michael Frankel, DASD(C3, space & IT programs)
  - COL Edward Siomacco (USA, CIO/G6) and Mr. Terry Edwards (CIO/G6)
  - Mr. Pace (USN, PEO C4I & space)
  - COL Steve Lisi (USAF)
  - Capt Lawrence Gaines *place holder (USMC)
  - Mr. Mark Schaeffer and Mr. Ken Hongfong (AT&L)
  - LtCol Jeffrey Wilson and Mr. Kevin Meiners (USD(I))
  - Dr. Steve Hutchinson and Mr. David Duma (DOT&E)
  - Col William Hall and LtCol Mike Convertino (Joint Staff J-6)
  - Ms. Shawn Spencer (STRATCOM)
  - Mr. Steve Derganc (JFCOM)
  - Mr. Steve Henson and Mr. Mark Lantz (IC/CIO)
  - Dr. Pravin Jain and Mr. Rebecca Cowin-Hirsch (DISA)
  - Mr. Chris Kubic (GIG IA SPO NSA)
  - Mr. Mike Regan (TCO)
  - Mr. Doug Marquis (TCM MJPO)
  - Mr. Howard Bylund and Ms. Ann Tso (GIG-BE SPO)
  - Col Steve Maclaird (JTRS JPO)
  - Mr. Rob Vietmeyer (NCES SPO)
  - Mr. Terry Hagle and Mr. Jack Zavin (GIG Architects)
  - Mr. Hank Dardy and Mr. Basil Decina (E2E Evaluation Facilities)

# GIG End-to-End Systems Engineering Oversight Relationship to Overall GIG Governance